

**CLAIMS**

What is claimed is:

1. A method for communicating a radio frequency (RF) signal, comprising:  
mixing a baseband signal with a plurality of oscillator signals with different phases in an interleaving manner; and  
communicating the mixed baseband signal as an RF signal.
2. The method as recited in claim 1, wherein the method is carried out by a transmitter.
3. The method as recited in claim 1, wherein the oscillator signals include an oscillator signal frequency substantially equal to an RF signal frequency of the RF signal.
4. The method as recited in claim 1, wherein the RF signal is modulated over a finite bandwidth.
5. The method as recited in claim 1, wherein the oscillator signals have phase differences of 0, 90, 180, and 270 degrees.
6. The method as recited in claim 1, wherein the mixing is carried out by a plurality of mixers.
7. The method as recited in claim 6, wherein the oscillator signals are input to the mixers in the interleaving manner.

8. The method as recited in claim 7, wherein the oscillator signals are input to the mixers in the interleaving manner by switching which oscillator signals are input to which mixers.
9. The method as recited in claim 8, wherein the switching occurs at a rate that is faster than a bandwidth of the RF signal.
10. The method as recited in claim 8, wherein the switching occurs in a substantially random manner.
11. The method as recited in claim 10, wherein the switching occurs in a random manner.
12. The method as recited in claim 1, wherein the baseband signal is inverted using an interleaving operation.
13. The method as recited in claim 1, wherein the baseband signal is routed to at least one mixer using an interleaving operation.
14. The method as recited in claim 1, wherein a plurality of the baseband signals is provided including an in-phase baseband signal and a quadrature baseband signal.
15. A subsystem for transmitting a radio frequency (RF) signal, comprising:  
means for mixing a baseband signal with a plurality of oscillator signals with different phases in an interleaving manner; and  
means for transmitting the mixed baseband signal as an RF signal.
16. A subsystem for transmitting a radio frequency (RF) signal, comprising:  
at least one mixer for mixing a baseband signal with a plurality of oscillator signals with different phases in an interleaving manner.

17. A system, comprising:
  - a mobile device in communication with a wireless communication network;
  - wherein the device includes an integrated circuit including:
    - at least one mixer for mixing a baseband signal with a plurality of oscillator signals with different phases in an interleaving manner.